



IFW16

RAW SEQUENCE LISTING

DATE: 08/26/2004

PATENT APPLICATION: US/09/723,722B

TIME: 11:14:33

Input Set : A:\152706441USSEQ3.txt

Output Set: N:\CRF4\08262004\I723722B.raw

4 <110> APPLICANT: Anderson, John P.
 5 Basi, Gurigbal
 6 Doane, Minh Tam
 7 Frigon, Normand
 8 John, Varghese
 9 Power, Michael
 10 Sinha, Sukanto
 11 Tatsuno, Gwen
 12 Tung, Jay
 13 Wang, Shuwen
 14 McConlogue, Lisa
 16 <120> TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
 17 Methods
 19 <130> FILE REFERENCE: 228-US-NEWC1
 21 <140> CURRENT APPLICATION NUMBER: 09/723,722B
 22 <141> CURRENT FILING DATE: 2000-11-28
 24 <150> PRIOR APPLICATION NUMBER: US 09/501,708
 25 <151> PRIOR FILING DATE: 2000-02-10
 27 <150> PRIOR APPLICATION NUMBER: 60/119,571
 28 <151> PRIOR FILING DATE: 1999-02-10
 30 <150> PRIOR APPLICATION NUMBER: 60/139,172
 31 <151> PRIOR FILING DATE: 1999-06-15
 33 <160> NUMBER OF SEQ ID NOS: 104
 35 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 37 <210> SEQ ID NO: 1
 38 <211> LENGTH: 1503
 39 <212> TYPE: DNA
 40 <213> ORGANISM: Homo sapiens
 42 <400> SEQUENCE: 1

43 atggcccaag cctgcctg gctcctgctg tggatgggag cgggagtgt gctgcccac 60
 44 ggcacccagc acggcatcgg gctgcccctg cgcagcggcc tggggggcgc ccccttgggg 120
 45 ctgcggtctgc cccgggagac cgacgaagag cccgaggagc ccggccggag gggcagcttt 180
 46 gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
 47 gtgggcagcc ccccgagac gctcaacatc ctggtggata caggcagcag taactttgca 300
 48 gtgggtgctg cccccaccc cttcctgcat cgctactacc agaggcagct gtccagcaca 360
 49 taccgggacc tccggaagg tgtgtatgtg ccctacaccc agggcaagt ggaaggggag 420
 50 ctgggcaccg acctggttaag catccccat ggccccaaag tcaactgtgc tgccaacatt 480
 51 gctgccatca ctgaatcaga caagtcttc atcaacggt ccaactggga aggcacctct 540
 52 gggctggcct atgctgagat tgccaggcct gacgactccc tggagccttt ctttgactct 600
 53 ctggttaaagc agaccacgt tcccaacctc ttctccctgc agctttgtgg tgetggttc 660
 54 cccctcaacc agtctgaagt gctggcctct gtcggaggga gcatgatcat tggaggtatc 720
 55 gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcggga gtggtattat 780
 56 gaggtgatca ttgtgcgggt ggagatcaat ggacaggatc tgaaaatgga ctgcaaggag 840

ENTERED

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57 tacaactatg acaagagcat tgtggacagt ggcaccacca accttcgttt gcccagaaa      900
58 gtgtttgaag ctgcagtcaa atccatcaag gcagcctcct ccacggagaa gttccctgat      960
59 ggtttctggc taggagagca gctgggtgtgc tggcaagcag gcaccacccc ttggaacatt     1020
60 tccccagtca tctcactcta cctaattgggt gaggttacca accagtcctt ccgcatcacc     1080
61 atccttcgcg agcaatacct gcggccagtg gaagatgtgg ccacgtccca agacgactgt     1140
62 tacaagtttg ccatctcaca gtcatccacg ggcactgtta tgggagctgt tatcatggag     1200
63 ggcttctacg ttgtctttga tcgggcccga aaacgaattg gctttgctgt cagcgcttgc     1260
64 catgtgcacg atgagttcag gacggcagcg gtggaaggcc cttttgtcac cttggacatg     1320
65 gaagactgtg gctacaacat tccacagaca gatgagtcaa ccctcatgac catagcctat     1380
66 gtcatggctg ccatctgcgc cctcttcatg ctgccactct gcctcatggt gtgtcagtgg     1440
67 cgctgcctcc gctgcctgcg ccagcagcat gatgactttg ctgatgacat ctccctgctg     1500
68 aag                                          1503

70 <210> SEQ ID NO: 2
71 <211> LENGTH: 501
72 <212> TYPE: PRT
73 <213> ORGANISM: Homo sapiens
75 <400> SEQUENCE: 2
76 Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
77 1          5          10          15
78 Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
79          20          25          30
80 Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
81          35          40          45
82 Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
83          50          55          60
84 Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
85 65          70          75          80
86 Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
87          85          90          95
88 Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
89          100         105         110
90 Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
91          115         120         125
92 Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
93          130         135         140
94 Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
95 145         150         155         160
96 Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
97          165         170         175
98 Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
99          180         185         190
100 Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
101          195         200         205
102 Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
103          210         215         220
104 Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
105 225         230         235         240
106 Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
107          245         250         255

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```

108 Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
109           260           265           270
110 Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
111           275           280           285
112 Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
113           290           295           300
114 Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
115 305           310           315           320
116 Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
117           325           330           335
118 Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
119           340           345           350
120 Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
121           355           360           365
122 Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
123           370           375           380
124 Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
125 385           390           395           400
126 Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
127           405           410           415
128 Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
129           420           425           430
130 Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
131           435           440           445
132 Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala
133           450           455           460
134 Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp
135 465           470           475           480
136 Arg Cys Leu Arg Cys Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp
137           485           490           495
138 Ile Ser Leu Leu Lys
139           500

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141 <210> SEQ ID NO: 3

142 <211> LENGTH: 24

143 <212> TYPE: DNA

144 <213> ORGANISM: Homo sapiens

146 <400> SEQUENCE: 3

147 gagagacgar garccwgagg agcc

24

149 <210> SEQ ID NO: 4

150 <211> LENGTH: 24

151 <212> TYPE: DNA

152 <213> ORGANISM: Artificial Sequence

154 <220> FEATURE:

155 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ

156 ID NO: 2

158 <400> SEQUENCE: 4

159 gagagacgar garccwgaag agcc

24

161 <210> SEQ ID NO: 5

162 <211> LENGTH: 24

RAW SEQUENCE LISTING

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Input Set : A:\152706441USSEQ3.txt

Output Set: N:\CRF4\08262004\I723722B.raw

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163 <212> TYPE: DNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
168     ID NO: 2
170 <400> SEQUENCE: 5
171 gagagacgar garccwgaag aacc 24
173 <210> SEQ ID NO: 6
174 <211> LENGTH: 24
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
180     ID NO: 2
182 <400> SEQUENCE: 6
183 gagagacgar garccwgagg aacc 24
185 <210> SEQ ID NO: 7
186 <211> LENGTH: 23
187 <212> TYPE: DNA
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
192     ID NO: 2
194 <400> SEQUENCE: 7
195 agagacgarg arccsgagga gcc 23
197 <210> SEQ ID NO: 8
198 <211> LENGTH: 23
199 <212> TYPE: DNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
204     ID NO: 2
206 <400> SEQUENCE: 8
207 agagacgarg arccsgaaga gcc 23
209 <210> SEQ ID NO: 9
210 <211> LENGTH: 23
211 <212> TYPE: DNA
212 <213> ORGANISM: Artificial Sequence
214 <220> FEATURE:
215 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
216     ID NO: 2
218 <400> SEQUENCE: 9
219 agagacgarg arccsgaaga acc 23
221 <210> SEQ ID NO: 10
222 <211> LENGTH: 23
223 <212> TYPE: DNA
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ

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RAW SEQUENCE LISTING

DATE: 08/26/2004

PATENT APPLICATION: US/09/723,722B

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Input Set : A:\152706441USSEQ3.txt

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228 ID NO: 2
230 <400> SEQUENCE: 10
231 agagacgarg arccsgagga acc 23
233 <210> SEQ ID NO: 11
234 <211> LENGTH: 23
235 <212> TYPE: DNA
236 <213> ORGANISM: Artificial Sequence
238 <220> FEATURE:
239 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
240 ID NO: 2
242 <400> SEQUENCE: 11
243 cgtcacagrt trtcaaccat ctc 23
245 <210> SEQ ID NO: 12
246 <211> LENGTH: 23
247 <212> TYPE: DNA
248 <213> ORGANISM: Artificial Sequence
250 <220> FEATURE:
251 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
252 ID NO: 2
254 <400> SEQUENCE: 12
255 cgtcacagrt trtctaccat ctc 23
257 <210> SEQ ID NO: 13
258 <211> LENGTH: 23
259 <212> TYPE: DNA
260 <213> ORGANISM: Artificial Sequence
262 <220> FEATURE:
263 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
264 ID NO: 2
266 <400> SEQUENCE: 13
267 cgtcacagrt trtccaccat ctc 23
269 <210> SEQ ID NO: 14
270 <211> LENGTH: 23
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
276 ID NO: 2
278 <400> SEQUENCE: 14
279 cgtcacagrt trtcgaccat ctc 23
281 <210> SEQ ID NO: 15
282 <211> LENGTH: 23
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial Sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
288 ID NO: 2
290 <400> SEQUENCE: 15
291 cgtcacagrt trtcaaccat ttc 23
293 <210> SEQ ID NO: 16

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/723,722B

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:22; N Pos. 12
Seq#:23; N Pos. 12
Seq#:24; N Pos. 12
Seq#:25; N Pos. 12
Seq#:26; N Pos. 7
Seq#:27; N Pos. 7
Seq#:28; N Pos. 3,12
Seq#:29; N Pos. 3,12
Seq#:34; N Pos. 16
Seq#:35; N Pos. 16
Seq#:36; N Pos. 16
Seq#:37; N Pos. 16
Seq#:48; N Pos. 6164,6238,6254,6255,6256,6257,6258,6259,6260,6261,6262,6263
Seq#:48; N Pos. 6264,6265,6266,6267,6268,6269,6270,6271,6272
Seq#:61; Xaa Pos. 4
Seq#:72; Xaa Pos. 10
Seq#:73; Xaa Pos. 5
Seq#:76; N Pos. 6,18,27,30,33,36,39,42,48,57
Seq#:78; Xaa Pos. 3
Seq#:81; Xaa Pos. 4

VERIFICATION SUMMARY

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Input Set : A:\152706441USSEQ3.txt

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L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:443 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:491 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0
L:599 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:960 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:6120
L:961 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:6180
L:962 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:6240
L:1475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:0
L:1967 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:0
L:1984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:0
L:2112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:0
L:2140 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:0
L:2183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0